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                        US 1997-63329P     19971027 (60)
                        US 1997-63327P     19971027 (60)
                        US 1997-63549P     19971028 (60)
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                        US 1997-63542P     19971028 (60)
                        US 1997-63544P     19971028 (60)
                        US 1997-63564P     19971028 (60)
                        US 1997-63734P     19971029 (60)
                        US 1997-63738P     19971029 (60)
                        US 1997-63704P     19971029 (60)
                        US 1997-63435P     19971029 (60)
                        US 1997-64215P     19971029 (60)
                        US 1997-63735P     19971029 (60)
                        US 1997-63732P     19971029 (60)
                        US 1997-64103P     19971031 (60)
                        US 1997-63870P     19971031 (60)
                        US 1997-64248P     19971103 (60)
                        US 1997-64809P     19971107 (60)
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                        US 1997-66364P     19971121 (60)
                        US 1997-66772P     19971124 (60)
                        US 1997-66466P     19971124 (60)
                        US 1997-66770P     19971124 (60)
                        US 1997-66511P     19971124 (60)
                        US 1997-66453P     19971124 (60)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO,
                        IL, 60610
NUMBER OF CLAIMS:       38
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     124 Drawing Page(s)
LINE COUNT:             21263
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


=> d his

     (FILE 'HOME' ENTERED AT 10:30:42 ON 15 JAN 2003)

     FILE 'MEDLINE, DGENE, EMBASE, SCISEARCH, USPATFULL, WPIDS, JICST-EPLUS,
     FSTA' ENTERED AT 10:31:56 ON 15 JAN 2003
L1          2316 S BONE MORPHOGENIC PROTEIN
L2         26968 S ARTICULAR CARTILAGE
L3           125 S OSTEOCHONDRAL GRAFT
L4             0 S L1 () L2 () L3
L5            76 S L1 AND L2
L6             1 S L5 AND L3
L7             1 S L3 AND L1

=> s l3 and regeneration
L8             4 L3 AND REGENERATION

=> d l8 ti abs ibib tot

L8   ANSWER 1 OF 4  USPATFULL
TI     Device for regeneration of articular cartilage and other
       tissue
AB     An implantable device for facilitating the healing of voids in bone,
       cartilage and soft tissue is disclosed. A preferred embodiment includes
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a cartilage region comprising a polyelectrolytic complex joined with a subchondral bone region. The cartilage region, of this embodiment, enhances the environment for chondrocytes to grow articular cartilage; while the subchondral bone region enhances the environment for cells which migrate into that region's macrostructure and which differentiate into osteoblasts. A hydrophobic barrier exists between said regions, of this embodiment. In one embodiment, the polyelectrolytic complex transforms to hydrogel, following the implant procedure.

ACCESSION NUMBER: 2002:55324 USPATFULL
TITLE: Device for **regeneration** of articular cartilage and other tissue
INVENTOR(S): Brekke, John H., Duluth, MN, UNITED STATES
Goldman, Scott M., Paoli, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002032488	A1	20020314
APPLICATION INFO.:	US 2001-909027	A1	20010719 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-206604, filed on 7 Dec 1998, GRANTED, Pat. No. US 6264701 Division of Ser. No. US 1994-242557, filed on 13 May 1994, GRANTED, Pat. No. US 5981825
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Alan D. Kamrath, Kensey Nash Corporation, 55 E. Uwchlan Avenue, Exton, PA, 19341
NUMBER OF CLAIMS: 56
EXEMPLARY CLAIM: 1
LINE COUNT: 1349

L8 ANSWER 2 OF 4 USPATFULL
TI Scaffold matrix and tissue maintaining systems
AB The invention concerns a scaffold which is used as a growth supportive base for various cells and tissue explants from three-dimensional tissue comprising naturally derived connective or skeletal tissue into attached flakes having a very high porosity. Alternatively the scaffold is composed of fused epiphyses.

ACCESSION NUMBER: 2002:16925 USPATFULL
TITLE: Scaffold matrix and tissue maintaining systems
INVENTOR(S): Nevo, Zvi, Herzliya, ISRAEL
Robinson, Dror, Shimshon, ISRAEL
PATENT ASSIGNEE(S): RAMOT UNIVERSITY AUTHORITY FOR APPLIED RESEARCH & INDUSTRIAL DEVELOPMENT LTD. (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009805	A1	20020124
APPLICATION INFO.:	US 2001-826389	A1	20010404 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-345138, filed on 6 Jul 1999, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LADAS & PARRY, 26 WEST 61ST STREET, NEW YORK, NY, 10023
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Page(s)
LINE COUNT: 903

L8 ANSWER 3 OF 4 USPATFULL
TI Multi-stage collagen-based template or implant for use in the repair of cartilage lesions
AB The invention is a template to aid in the **regeneration** of

articular cartilage. The template is formed by combining a porous collagen sponge ("collagen matrix") with a dense collagen membrane. The dense collagen membrane is placed on the surface of the cartilage defect to prevent cell migration from the subchondral plate and vasculature. The collagen membrane will allow movement and exchange of fluids, nutrients, cytokines and other factors necessary for cartilage **regeneration**. The collagen matrix has been developed to allow attachment and growth of cells, specifically chondrocytes which are normally found in articular cartilage. The collagen matrix can be combined with chondrocytes in vitro, and therefore serve to transport cultured cells to the defect site and to retain the cells in position following implantation. Procedures are described to effectively use the two-staged template, and to fix the template to the repair site.

ACCESSION NUMBER:	2000:80202 USPATFULL
TITLE:	Multi-stage collagen-based template or implant for use in the repair of cartilage lesions
INVENTOR(S):	Pachence, James M., Hopewell, NJ, United States Frenkel, Sally, Flushing, NY, United States Menche, David, New York, NY, United States
PATENT ASSIGNEE(S):	The Hospital for Joint Disease Orthopaedic Institute, New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6080194		20000627	
APPLICATION INFO.:	US 1995-385290		19950210	(8)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Prebilic, Paul B.
LEGAL REPRESENTATIVE:	Caesar, Rivise, Bernstein, Cohen & Pokotilow, Ltd.
NUMBER OF CLAIMS:	16
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:	636

L8 ANSWER 4 OF 4 JICST-EPlus COPYRIGHT 2003 JST

TI Four Case Reports of Mosaicplasty for Knee Joint.

AB Repairing a defect or injury of articular cartilage is a significant challenge. **Osteochondral graft**, periosteal transplantation, drilling, and chondrocyte transplantation have been attempted clinically for articular surface defects. We evaluated repairs of articular cartilage by mosaicplasty. Four knees of 4 patients (2 men and 2 women) that underwent mosaicplasty were evaluated in this series. Mean patient age at surgery was 41 years. All knees underwent follow-up MRI, 2 knees underwent follow-up arthroscopy and needle biopsy after informed consent was obtained. The mean period from surgery to final follow-up was 21 months. The mean period from surgery to follow-up arthroscopy was 11 months. Four cases of mosaicplasty presented satisfactory **regeneration** of the articular cartilage as seem by MRI or arthroscopic examination. Two knees, after receiving mosaicplasty, demonstrated **regeneration** of hyaline cartilage even around the gaps in mosaicplasty, by needle biopsy. However, the structure of hyaline cartilage around the gaps in mosaicplasty differed from that of normal hyaline cartilage. Several reports described a good clinical outcome of mosaicplasty. However, only Hangody reported good hyaline cartilage **regeneration** at the recipient site and fibrous cartilage at the donor site. Our results demonstrated **regeneration** of the hyaline cartilage in the gap area of mosaicplasty, but the structure of hyaline cartilage differed from normal. There is a risk of renewed degeneration due to the poor structure of hyaline cartilage. Mosaicplasty is a sure method of repairing hyaline cartilage where there is a small defect in the articular surface. However, one report pointed out the risk of articular degeneration at the donor site after mosaicplasty. One of our cases

demonstrated bony defect at the donor site 21 months after mosaicplasty. Adequate observation of both the donor site and recipient site is needed after mosaicplasty. (author abst.)

ACCESSION NUMBER: 1010895536 JICST-EPlus
TITLE: Four Case Reports of Mosaicplasty for Knee Joint.
AUTHOR: ICHINOHE SADAFUMI; KOYAMA AKIKO; ENDO TAKESHI; KITAGAWA YUKA; YOSHIDA MASAAKI; SHIMAMURA TADASHI SHIROKURA YOSHIHIRO; HONDA KEI
CORPORATE SOURCE: Iwateidai Seikeigeka
Moriokashibyoin Seikeigeka
SOURCE: Nippon Riumachi, Kansetsu Geka Gakkai Zasshi (Japanese Journal of Rheumatism and Joint Surgery), (2001) vol. 20, no. 2, pp. 169-175. Journal Code: Y0692A (Fig. 6, Ref. 10) ISSN: 0287-3214
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New

=> d his

(FILE 'HOME' ENTERED AT 10:30:42 ON 15 JAN 2003)

FILE 'MEDLINE, DGENE, EMBASE, SCISEARCH, USPATFULL, WPIDS, JICST-EPLUS, FSTA' ENTERED AT 10:31:56 ON 15 JAN 2003

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L1          2316 S BONE MORPHOGENIC PROTEIN
L2         26968 S ARTICULAR CARTILAGE
L3           125 S OSTEOCHONDRAL GRAFT
L4             0 S L1 () L2 () L3
L5            76 S L1 AND L2
L6             1 S L5 AND L3
L7             1 S L3 AND L1
L8             4 S L3 AND REGENERATION
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=> s l5 and regeneration
L9 44 L5 AND REGENERATION

=> d l9 ti abs ibib 1-15

L9 ANSWER 1 OF 44 MEDLINE
TI Cartilage and bone **regeneration** using gene-enhanced tissue engineering.
AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human **bone morphogenic protein**-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks. The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage regeneration** at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria. This is the first report of **articular cartilage regeneration** using a combined gene therapy and tissue engineering approach.
ACCESSION NUMBER: 2000488818 MEDLINE

DOCUMENT NUMBER: 20492911 PubMed ID: 11039767
TITLE: Cartilage and bone **regeneration** using gene-enhanced tissue engineering.
AUTHOR: Mason J M; Breitbart A S; Barcia M; Porti D; Pergolizzi R G; Grande D A
CORPORATE SOURCE: Department of Research, North Shore University Hospital-New York University School of Medicine, Manhasset 11030, USA.
SOURCE: CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, (2000 Oct) (379 Suppl) S171-8.
Journal code: 0075674. ISSN: 0009-921X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001103

L9 ANSWER 2 OF 44 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
TI Cartilage and bone **regeneration** using gene-enhanced tissue engineering.
AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human **bone morphogenic protein**-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks. The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage regeneration** at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria. This is the first report of **articular cartilage regeneration** using a combined gene therapy and tissue engineering approach.
ACCESSION NUMBER: 2000362559 EMBASE
TITLE: Cartilage and bone **regeneration** using gene-enhanced tissue engineering.
AUTHOR: Mason J.M.; Breitbart A.S.; Barcia M.; Porti D.; Pergolizzi R.G.; Grande D.A.
CORPORATE SOURCE: Dr. J.M. Mason, Gene Therapy Vector Laboratory, Department of Research, North Shore University Hospital, 350 Community Drive, Manhasset, NY 11030, United States
SOURCE: Clinical Orthopaedics and Related Research, (2000) -/379 SUPPL. (S171-S178).
Refs: 27
ISSN: 0009-921X CODEN: CORTBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 022 Human Genetics
033 Orthopedic Surgery
036 Health Policy, Economics and Management
LANGUAGE: English
SUMMARY LANGUAGE: English

L9 ANSWER 3 OF 44 SCISEARCH COPYRIGHT 2003 ISI (R)
TI Cartilage and bone **regeneration** using gene-enhanced tissue

engineering

AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human hone morphogenic protein-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks, The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage regeneration** at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria, This is the first report of **articular cartilage regeneration** using a combined gene therapy and tissue engineering approach.

ACCESSION NUMBER: 2000:777821 SCISEARCH
THE GENUINE ARTICLE: 362NP
TITLE: Cartilage and bone **regeneration** using gene-enhanced tissue engineering
AUTHOR: Mason J M (Reprint); Breitbart A S; Barcia M; Porti D; Pergolizzi R G; Grande D A
CORPORATE SOURCE: NYU, GENE THERAPY VECTOR LAB, DEPT RES, N SHORE UNIV HOSP, SCH MED, 350 COMMUNITY DR, MANHASSET, NY 11030 (Reprint); NYU, DIV PLAST & RECONSTRUCT SURG, SCH MED, N SHORE UNIV HOSP, MANHASSET, NY 11030; NYU, DIV ORTHOPED SURG, SCH MED, N SHORE UNIV HOSP, DEPT SURG, MANHASSET, NY 11030
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, (OCT 2000) No. 379, Supp. [S], pp. S171-S178.
Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621.
ISSN: 0009-921X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 27
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L9 ANSWER 4 OF 44 USPATFULL

TI Secreted and transmembrane polypeptides and nucleic acids encoding the same

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:3495 USPATFULL
TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES

Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003003530	A1	20030102
APPLICATION INFO.:	US 2001-904011	A1	20010711 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224
	WO 2000-US5841	20000302
	WO 2000-US7377	20000320
	WO 2000-US8439	20000330
	WO 2000-US14042	20000522
	WO 2000-US15264	20000602
	WO 2000-US20710	20000728
	WO 2000-US23328	20000824
	US 1997-59115P	19970917 (60)
	US 1997-59184P	19970917 (60)
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	US 1997-59117P	19970917 (60)

	US 1997-59113P	19970917 (60)
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	US 1997-63486P	19971021 (60)
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	US 1997-63128P	19971024 (60)
	US 1997-63329P	19971027 (60)
	US 1997-63327P	19971027 (60)
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	US 1997-66770P	19971124 (60)
	US 1997-66511P	19971124 (60)
	US 1997-66453P	19971124 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 21255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 44 USPATFULL

TI Secreted and transmembrane polypeptides and nucleic acids encoding the same

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for

producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:344632 USPATFULL

TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same

INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002198366	A1	20021226
APPLICATION INFO.:	US 2001-907841	A1	20010717 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224

WO 2000-US5841	20000402	
WO 2000-US7377	20000320	
WO 2000-US8439	20000330	
WO 2000-US14042	20000522	
WO 2000-US15264	20000602	
WO 2000-US20710	20000728	
WO 2000-US23328	20000824	
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US 1997-63732P	19971029	(60)
US 1997-64103P	19971031	(60)
US 1997-63870P	19971031	(60)
US 1997-64248P	19971103	(60)
US 1997-64809P	19971107	(60)
US 1997-65186P	19971112	(60)
US 1997-65846P	19971117	(60)
US 1997-65693P	19971118	(60)
US 1997-66120P	19971121	(60)
US 1997-66364P	19971121	(60)
US 1997-66772P	19971124	(60)
US 1997-66466P	19971124	(60)
US 1997-66770P	19971124	(60)
US 1997-66511P	19971124	(60)
US 1997-66453P	19971124	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 21263

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 44 USPATFULL

TI Secreted and transmembrane polypeptides and nucleic acids encoding the same

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:343945 USPATFULL

TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same

INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002197671	A1	20021226
APPLICATION INFO.:	US 2001-907824	A1	20010717 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129

WO 1999-US28313	19991130	
WO 1999-US28301	19991201	
WO 1999-US28564	19991202	
WO 1999-US28565	19991202	
WO 1999-US30095	19991216	
WO 1999-US30999	19991220	
WO 1999-US30911	19991220	
WO 2000-US219	20000105	
WO 2000-US3565	20000211	
WO 2000-US4414	20000222	
WO 2000-US5004	20000224	
WO 2000-US5841	20000302	
WO 2000-US7377	20000320	
WO 2000-US8439	20000330	
WO 2000-US14042	20000522	
WO 2000-US15264	20000602	
WO 2000-US20710	20000728	
WO 2000-US23328	20000824	
US 1997-59115P	19970917	(60)
US 1997-59184P	19970917	(60)
US 1997-59122P	19970917	(60)
US 1997-59117P	19970917	(60)
US 1997-59113P	19970917	(60)
US 1997-59121P	19970917	(60)
US 1997-59119P	19970917	(60)
US 1997-59263P	19970918	(60)
US 1997-59266P	19970918	(60)
US 1997-62125P	19971015	(60)
US 1997-62287P	19971017	(60)
US 1997-62285P	19971017	(60)
US 1997-63486P	19971021	(60)
US 1997-62816P	19971024	(60)
US 1997-62814P	19971024	(60)
US 1997-63127P	19971024	(60)
US 1997-63120P	19971024	(60)
US 1997-63121P	19971024	(60)
US 1997-63045P	19971024	(60)
US 1997-63128P	19971024	(60)
US 1997-63329P	19971027	(60)
US 1997-63327P	19971027	(60)
US 1997-63549P	19971028	(60)
US 1997-63541P	19971028	(60)
US 1997-63550P	19971028	(60)
US 1997-63542P	19971028	(60)
US 1997-63544P	19971028	(60)
US 1997-63564P	19971028	(60)
US 1997-63734P	19971029	(60)
US 1997-63738P	19971029	(60)
US 1997-63704P	19971029	(60)
US 1997-63435P	19971029	(60)
US 1997-64215P	19971029	(60)
US 1997-63735P	19971029	(60)
US 1997-63732P	19971029	(60)
US 1997-64103P	19971031	(60)
US 1997-63870P	19971031	(60)
US 1997-64248P	19971103	(60)
US 1997-64809P	19971107	(60)
US 1997-65186P	19971112	(60)
US 1997-65846P	19971117	(60)
US 1997-65693P	19971118	(60)
US 1997-66120P	19971121	(60)
US 1997-66364P	19971121	(60)
US 1997-66772P	19971124	(60)
US 1997-66466P	19971124	(60)

	US 1997-66770P	19971124 (60)
	US 1997-66511P	19971124 (60)
	US 1997-66453P	19971124 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 22162
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 7 OF 44 USPATFULL
TI Methods of using bone morphogenic proteins as biomarkers for determining cartilage degeneration and aging
AB Methods are provided for determining cartilage degeneration, **regeneration**, or aging in a joint tissue in a patient by measuring levels of osteogenic protein-1 (OP-1) protein and/or mRNA in synovial fluid or joint tissue. The methods according to the invention are useful for detecting, diagnosing, predicting, determining a predisposition for, or monitoring joint tissue degeneration, **regeneration**, or aging in a patient including inflammatory joint disease or age-related disorders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:337321 USPATFULL
TITLE: Methods of using bone morphogenic proteins as biomarkers for determining cartilage degeneration and aging
INVENTOR(S): Chubinskaya, Susanna, Vernon Hills, IL, UNITED STATES
Rueger, David C., Southborough, MA, UNITED STATES
Kuettner, Klaus E., Chicago, IL, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002192679	A1	20021219	
APPLICATION INFO.:	US 2002-81163	A1	20020220	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-348111P	20011109 (60)
	US 2001-270528P	20010221 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TESTA, HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110
NUMBER OF CLAIMS: 47
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Page(s)
LINE COUNT: 1482
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 8 OF 44 USPATFULL
TI Secreted and transmembrane polypeptides and nucleic acids encoding the same
AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:337301 USPATFULL

TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same

INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, Wlliam I., Hillsborough, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002192659	A1	20021219
APPLICATION INFO.:	US 2001-902853	A1	20010710 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224
	WO 2000-US5841	20000302
	WO 2000-US7377	20000320

WO 2000-US8439	20000330	
WO 2000-US14042	20000522	
WO 2000-US15264	20000602	
WO 2000-US20710	20000728	
WO 2000-US23328	20000824	
US 1997-59115P	19970917	(60)
US 1997-59184P	19970917	(60)
US 1997-59122P	19970917	(60)
US 1997-59117P	19970917	(60)
US 1997-59113P	19970917	(60)
US 1997-59121P	19970917	(60)
US 1997-59119P	19970917	(60)
US 1997-59263P	19970918	(60)
US 1997-59266P	19970918	(60)
US 1997-62125P	19971015	(60)
US 1997-62287P	19971017	(60)
US 1997-62285P	19971017	(60)
US 1997-63486P	19971021	(60)
US 1997-62816P	19971024	(60)
US 1997-62814P	19971024	(60)
US 1997-63127P	19971024	(60)
US 1997-63120P	19971024	(60)
US 1997-63121P	19971024	(60)
US 1997-63045P	19971024	(60)
US 1997-63128P	19971024	(60)
US 1997-63329P	19971027	(60)
US 1997-63327P	19971027	(60)
US 1997-63549P	19971028	(60)
US 1997-63541P	19971028	(60)
US 1997-63550P	19971028	(60)
US 1997-63542P	19971028	(60)
US 1997-63544P	19971028	(60)
US 1997-63564P	19971028	(60)
US 1997-63734P	19971029	(60)
US 1997-63738P	19971029	(60)
US 1997-63704P	19971029	(60)
US 1997-63435P	19971029	(60)
US 1997-64215P	19971029	(60)
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US 1997-63732P	19971029	(60)
US 1997-64103P	19971031	(60)
US 1997-63870P	19971031	(60)
US 1997-64248P	19971103	(60)
US 1997-64809P	19971107	(60)
US 1997-65186P	19971112	(60)
US 1997-65846P	19971117	(60)
US 1997-65693P	19971118	(60)
US 1997-66120P	19971121	(60)
US 1997-66364P	19971121	(60)
US 1997-66772P	19971124	(60)
US 1997-66466P	19971124	(60)
US 1997-66770P	19971124	(60)
US 1997-66511P	19971124	(60)
US 1997-66453P	19971124	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 21726
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 9 OF 44 USPATFULL
TI Peptide scaffold encapsulation of tissue cells and uses thereof
AB The invention features peptide scaffolds that are useful in the repair and replacement of various tissues. The invention also provides methods for making these scaffolds and methods for using them.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:287608 USPATFULL
TITLE: Peptide scaffold encapsulation of tissue cells and uses thereof
INVENTOR(S): Kisiday, John, Watertown, MA, UNITED STATES
Grodzinsky, Alan, Lexington, MA, UNITED STATES
Zhang, Shuguang, Lexington, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002160471	A1	20021031
APPLICATION INFO.:	US 2001-778200	A1	20010206 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 1010
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 10 OF 44 USPATFULL
TI Secreted and transmembrane polypeptides and nucleic acids encoding the same
AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:287511 USPATFULL
TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002160374	A1	20021031
APPLICATION INFO.:	US 2001-905291	A1	20010712 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224
	WO 2000-US5841	20000302
	WO 2000-US7377	20000320
	WO 2000-US8439	20000330
	WO 2000-US14042	20000522
	WO 2000-US15264	20000602
	WO 2000-US20710	20000728
	WO 2000-US23328	20000824
	US 1997-59115P	19970917 (60)
	US 1997-59184P	19970917 (60)
	US 1997-59122P	19970917 (60)
	US 1997-59117P	19970917 (60)
	US 1997-59113P	19970917 (60)
	US 1997-59121P	19970917 (60)
	US 1997-59119P	19970917 (60)
	US 1997-59263P	19970918 (60)
	US 1997-59266P	19970918 (60)
	US 1997-62125P	19971015 (60)
	US 1997-62287P	19971017 (60)
	US 1997-62285P	19971017 (60)
	US 1997-63486P	19971021 (60)
	US 1997-62816P	19971024 (60)
	US 1997-62814P	19971024 (60)
	US 1997-63127P	19971024 (60)
	US 1997-63120P	19971024 (60)
	US 1997-63121P	19971024 (60)
	US 1997-63045P	19971024 (60)
	US 1997-63128P	19971024 (60)

	US 1997-63329P	19971027 (60)
	US 1997-63327P	19971027 (60)
	US 1997-63549P	19971028 (60)
	US 1997-63541P	19971028 (60)
	US 1997-63550P	19971028 (60)
	US 1997-63542P	19971028 (60)
	US 1997-63544P	19971028 (60)
	US 1997-63564P	19971028 (60)
	US 1997-63734P	19971029 (60)
	US 1997-63738P	19971029 (60)
	US 1997-63704P	19971029 (60)
	US 1997-63435P	19971029 (60)
	US 1997-64215P	19971029 (60)
	US 1997-63735P	19971029 (60)
	US 1997-63732P	19971029 (60)
	US 1997-64103P	19971031 (60)
	US 1997-63870P	19971031 (60)
	US 1997-64248P	19971103 (60)
	US 1997-64809P	19971107 (60)
	US 1997-65186P	19971112 (60)
	US 1997-65846P	19971117 (60)
	US 1997-65693P	19971118 (60)
	US 1997-66120P	19971121 (60)
	US 1997-66364P	19971121 (60)
	US 1997-66772P	19971124 (60)
	US 1997-66466P	19971124 (60)
	US 1997-66770P	19971124 (60)
	US 1997-66511P	19971124 (60)
	US 1997-66453P	19971124 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610	
NUMBER OF CLAIMS:	38	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	124 Drawing Page(s)	
LINE COUNT:	21310	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 11 OF 44 USPATFULL

TI Secreted and transmembrane polypeptides and nucleic acids encoding the same

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2002:265833 USPATFULL
TITLE:	Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S):	Ashkenazi, Avi, San Mateo, CA, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES Desnoyers, Luc, San Francisco, CA, UNITED STATES Eaton, Dan L., San Rafael, CA, UNITED STATES Ferrara, Napoleone, San Francisco, CA, UNITED STATES Filvaroff, Ellen, San Francisco, CA, UNITED STATES Fong, Sherman, Alameda, CA, UNITED STATES Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES Gerber, Hanspeter, San Francisco, CA, UNITED STATES Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002146709	A1	20021010
APPLICATION INFO.:	US 2001-909088	A1	20010718 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224
	WO 2000-US5841	20000302
	WO 2000-US7377	20000320
	WO 2000-US8439	20000330
	WO 2000-US14042	20000522
	WO 2000-US15264	20000602
	WO 2000-US20710	20000728
	WO 2000-US23328	20000824
	US 1997-59115P	19970917 (60)
	US 1997-59184P	19970917 (60)
	US 1997-59122P	19970917 (60)
	US 1997-59117P	19970917 (60)
	US 1997-59113P	19970917 (60)
	US 1997-59121P	19970917 (60)
	US 1997-59119P	19970917 (60)
	US 1997-59263P	19970918 (60)
	US 1997-59266P	19970918 (60)

US 1997-62125P	19971015	(60)
US 1997-62287P	19971017	(60)
US 1997-62285P	19971017	(60)
US 1997-63486P	19971021	(60)
US 1997-62816P	19971024	(60)
US 1997-62814P	19971024	(60)
US 1997-63127P	19971024	(60)
US 1997-63120P	19971024	(60)
US 1997-63121P	19971024	(60)
US 1997-63045P	19971024	(60)
US 1997-63128P	19971024	(60)
US 1997-63329P	19971027	(60)
US 1997-63327P	19971027	(60)
US 1997-63549P	19971028	(60)
US 1997-63541P	19971028	(60)
US 1997-63550P	19971028	(60)
US 1997-63542P	19971028	(60)
US 1997-63544P	19971028	(60)
US 1997-63564P	19971028	(60)
US 1997-63734P	19971029	(60)
US 1997-63738P	19971029	(60)
US 1997-63704P	19971029	(60)
US 1997-63435P	19971029	(60)
US 1997-64215P	19971029	(60)
US 1997-63735P	19971029	(60)
US 1997-63732P	19971029	(60)
US 1997-64103P	19971031	(60)
US 1997-63870P	19971031	(60)
US 1997-64248P	19971103	(60)
US 1997-64809P	19971107	(60)
US 1997-65186P	19971112	(60)
US 1997-65846P	19971117	(60)
US 1997-65693P	19971118	(60)
US 1997-66120P	19971121	(60)
US 1997-66364P	19971121	(60)
US 1997-66772P	19971124	(60)
US 1997-66466P	19971124	(60)
US 1997-66770P	19971124	(60)
US 1997-66511P	19971124	(60)
US 1997-66453P	19971124	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 21668
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 12 OF 44 USPATFULL
TI **Bone morphogenic protein** (BMP)
polynucleotides, polypeptides, and antibodies
AB The present invention relates to novel human BMP polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human BMP polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human BMP polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:259593 USPATFULL
TITLE: **Bone morphogenic protein**

(BMP) polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002143170	A1	20021003
APPLICATION INFO.:	US 2002-67422	A1	20020207 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-685899, filed on 11 Oct 2000, PENDING Continuation-in-part of Ser. No. WO 2000-US9028, filed on 6 Apr 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-130693P	19990423 (60)
	US 1999-131672P	19990429 (60)
	US 1999-147020P	19990803 (60)
	US 1999-152933P	19990909 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 10845
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 13 OF 44 USPATFULL
TI Secreted and transmembrane polypeptides and nucleic acids encoding the same
AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:243054 USPATFULL
TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002132240	A1	20020919
APPLICATION INFO.:	US 2001-909320	A1	20010718 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
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	WO 2000-US219	20000105
	WO 2000-US3565	20000211
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	WO 2000-US5841	20000302
	WO 2000-US7377	20000320
	WO 2000-US8439	20000330
	WO 2000-US14042	20000522
	WO 2000-US15264	20000602
	WO 2000-US20710	20000728
	WO 2000-US23328	20000824
	US 1997-59115P	19970917 (60)
	US 1997-59184P	19970917 (60)
	US 1997-59122P	19970917 (60)
	US 1997-59117P	19970917 (60)
	US 1997-59113P	19970917 (60)
	US 1997-59121P	19970917 (60)
	US 1997-59119P	19970917 (60)
	US 1997-59263P	19970918 (60)
	US 1997-59266P	19970918 (60)
	US 1997-62125P	19971015 (60)
	US 1997-62287P	19971017 (60)
	US 1997-62285P	19971017 (60)
	US 1997-63486P	19971021 (60)
	US 1997-62816P	19971024 (60)
	US 1997-62814P	19971024 (60)
	US 1997-63127P	19971024 (60)
	US 1997-63120P	19971024 (60)
	US 1997-63121P	19971024 (60)

US 1997-63045P	19971024	(60)
US 1997-63128P	19971024	(60)
US 1997-63329P	19971027	(60)
US 1997-63327P	19971027	(60)
US 1997-63549P	19971028	(60)
US 1997-63541P	19971028	(60)
US 1997-63550P	19971028	(60)
US 1997-63542P	19971028	(60)
US 1997-63544P	19971028	(60)
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US 1997-63734P	19971029	(60)
US 1997-63738P	19971029	(60)
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US 1997-64215P	19971029	(60)
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US 1997-63732P	19971029	(60)
US 1997-64103P	19971031	(60)
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US 1997-66364P	19971121	(60)
US 1997-66772P	19971124	(60)
US 1997-66466P	19971124	(60)
US 1997-66770P	19971124	(60)
US 1997-66511P	19971124	(60)
US 1997-66453P	19971124	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 124 Drawing Page(s)
LINE COUNT: 21778
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 14 OF 44 USPATFULL
TI Use of adipose tissue-derived stromal cells for chondrocyte differentiation and cartilage repair
AB Methods and compositions for directing adipose-derived stromal cells cultivated in vitro to differentiate into cells of the chondrocyte lineage are disclosed. The invention further provides a variety of chondroinductive agents which can be used singly or in combination with other nutrient components to induce chondrogenesis in adipose-derived stromal cells either in cultivating monolayers or in a biocompatible lattice or matrix in a three-dimensional configuration. Use of the differentiated chondrocytes for the therapeutic treatment of a number of human conditions and diseases including repair of cartilage in vivo is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:214259 USPATFULL
TITLE: Use of adipose tissue-derived stromal cells for chondrocyte differentiation and cartilage repair
INVENTOR(S): Halvorsen, Yuan-Di C., Holly Springs, NC, UNITED STATES
Wilkison, William O., Bahama, NC, UNITED STATES
Gimble, Jeffrey Martin, Chapel Hill, NC, UNITED STATES

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002115647	A1	20020822
APPLICATION INFO.:	US 2002-125106	A1	20020418 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-573989, filed on 17 May 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-149850P	19990819 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KING & SPALDING, 191 PEACHTREE STREET, N.E., ATLANTA, GA, 30303-1763
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 831
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 15 OF 44 USPATFULL

TI Use of adipose tissue-derived stromal cells for chondrocyte differentiation and cartilage repair

AB Methods and compositions for directing adipose-derived stromal cells cultivated in vitro to differentiate into cells of the chondrocyte lineage are disclosed. The invention further provides a variety of chondroinductive agents which can be used singly or in combination with other nutrient components to induce chondrogenesis in adipose-derived stromal cells either in cultivating monolayers or in a biocompatible lattice or matrix in a three-dimensional configuration. Use of the differentiated chondrocytes for the therapeutic treatment of a number of human conditions and diseases including repair of cartilage in vivo is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:194742 USPATFULL
TITLE: Use of adipose tissue-derived stromal cells for chondrocyte differentiation and cartilage repair
INVENTOR(S): Halvorsen, Yuan-Di C., Holly Springs, NC, United States
Wilkison, William O., Bahama, NC, United States
Gimble, Jeffrey Martin, Chapel Hill, NC, United States
PATENT ASSIGNEE(S): Artecel Science, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6429013	B1	20020806
APPLICATION INFO.:	US 2000-573989		20000517 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-149850P	19990819 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Guzo, David
ASSISTANT EXAMINER: Davis, Katharine F
LEGAL REPRESENTATIVE: King & Spalding, Knowles, Sherry M., Bennett-Paris, Joseph
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 995
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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 NEWS  3  Apr 09  BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09  ZDB will be removed from STN
 NEWS  5  Apr 19  US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22  Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22  BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22  Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03  New e-mail delivery for search results now available
 NEWS 10  Jun 10  MEDLINE Reload
 NEWS 11  Jun 10  PCTFULL has been reloaded
 NEWS 12  Jul 02  FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22  USAN to be reloaded July 28, 2002;
                  saved answer sets no longer valid
 NEWS 14  Jul 29  Enhanced polymer searching in REGISTRY
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 NEWS 16  Aug 08  CANCERLIT reload
 NEWS 17  Aug 08  PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08  NTIS has been reloaded and enhanced
 NEWS 19  Aug 19  Aquatic Toxicity Information Retrieval (AQUIRE)
                  now available on STN
 NEWS 20  Aug 19  IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19  The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26  Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03  JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16  Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16  CA Section Thesaurus available in CAPLUS and CA
 NEWS 26  Oct 01  CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 27  Oct 21  EVENTLINE has been reloaded
 NEWS 28  Oct 24  BEILSTEIN adds new search fields
 NEWS 29  Oct 24  Nutraceuticals International (NUTRACEUT) now available on STN
 NEWS 30  Oct 25  MEDLINE SDI run of October 8, 2002
 NEWS 31  Nov 18  DKILIT has been renamed APOLLIT
 NEWS 32  Nov 25  More calculated properties added to REGISTRY
 NEWS 33  Dec 02  TIBKAT will be removed from STN
 NEWS 34  Dec 04  CSA files on STN
 NEWS 35  Dec 17  PCTFULL now covers WP/PCT Applications from 1978 to date
 NEWS 36  Dec 17  TOXCENTER enhanced with additional content
 NEWS 37  Dec 17  Adis Clinical Trials Insight now available on STN
 NEWS 38  Dec 30  ISMEC no longer available
 NEWS 39  Jan 13  Indexing added to some pre-1967 records in CA/CAPLUS

 NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
               CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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=> file medline, dgene, embase, scisearch, uspatful, wpids, jicst, fsta
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=> s bone morphogenic protein
L1         2316 BONE MORPHOGENIC PROTEIN

=> s articular cartilage
L2        26968 ARTICULAR CARTILAGE

=> s osteochondral graft
L3          125 OSTEOCHONDRAL GRAFT

=> s l1 () l2 () l3
L4            0 L1 (W) L2 (W) L3

=> s l1 and l2
L5           76 L1 AND L2

=> s l5 and l3
L6            1 L5 AND L3
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=> d l6 ti abs ibib tot

L6   ANSWER 1 OF 1  USPATFULL
TI     Device for regeneration of articular cartilage and
       other tissue
AB     An implantable device for facilitating the healing of voids in bone,
       cartilage and soft tissue is disclosed. A preferred embodiment includes
       a cartilage region comprising a polyelectrolytic complex joined with a
       subchondral bone region. The cartilage region, of this embodiment,
       enhances the environment for chondrocytes to grow articular
       cartilage; while the subchondral bone region enhances the
       environment for cells which migrate into that region's macrostructure
       and which differentiate into osteoblasts. A hydrophobic barrier exists
       between said regions, of this embodiment. In one embodiment, the
       polyelectrolytic complex transforms to hydrogel, following the implant
       procedure.

ACCESSION NUMBER:        2002:55324  USPATFULL
TITLE:                   Device for regeneration of articular
                         cartilage and other tissue
INVENTOR(S):             Brekke, John H., Duluth, MN, UNITED STATES
                         Goldman, Scott M., Paoli, PA, UNITED STATES

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2002032488      A1   20020314
APPLICATION INFO.:       US 2001-909027     A1   20010719  (9)
RELATED APPLN. INFO.:    Continuation-in-part of Ser. No. US 1998-206604, filed
                         on 7 Dec 1998, GRANTED, Pat. No. US 6264701 Division of
                         Ser. No. US 1994-242557, filed on 13 May 1994, GRANTED,
                         Pat. No. US 5981825
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    Alan D. Kamrath, Kensey Nash Corporation, 55 E. Uwchlan
                         Avenue, Exton, PA, 19341
NUMBER OF CLAIMS:        56
EXEMPLARY CLAIM:         1
LINE COUNT:              1349


=> d his

     (FILE 'HOME' ENTERED AT 10:30:42 ON 15 JAN 2003)

     FILE 'MEDLINE, DGENE, EMBASE, SCISEARCH, USPATFULL, WPIDS, JICST-EPLUS,
     FSTA' ENTERED AT 10:31:56 ON 15 JAN 2003
L1          2316 S BONE MORPHOGENIC PROTEIN
L2         26968 S ARTICULAR CARTILAGE
L3           125 S OSTEOCHONDRAL GRAFT
L4             0 S L1 () L2 () L3
L5            76 S L1 AND L2
L6             1 S L5 AND L3

=> s l3 and l1
L7             1 L3 AND L1

=> d l7 ti abs ibib tot

L7   ANSWER 1 OF 1  USPATFULL
TI     Device for regeneration of articular cartilage and other tissue
AB     An implantable device for facilitating the healing of voids in bone,
       cartilage and soft tissue is disclosed. A preferred embodiment includes
       a cartilage region comprising a polyelectrolytic complex joined with a
```

subchondral bone region. The cartilage region, of this embodiment, enhances the environment for chondrocytes to grow articular cartilage; while the subchondral bone region enhances the environment for cells which migrate into that region's macrostructure and which differentiate into osteoblasts. A hydrophobic barrier exists between said regions, of this embodiment. In one embodiment, the polyelectrolytic complex transforms to hydrogel, following the implant procedure.

ACCESSION NUMBER:	2002:55324 USPATFULL
TITLE:	Device for regeneration of articular cartilage and other tissue
INVENTOR(S):	Brekke, John H., Duluth, MN, UNITED STATES Goldman, Scott M., Paoli, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002032488	A1	20020314
APPLICATION INFO.:	US 2001-909027	A1	20010719 (9)

RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-206604, filed on 7 Dec 1998, GRANTED, Pat. No. US 6264701 Division of Ser. No. US 1994-242557, filed on 13 May 1994, GRANTED, Pat. No. US 5981825
DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	Alan D. Kamrath, Kensey Nash Corporation, 55 E. Uwchlan Avenue, Exton, PA, 19341
NUMBER OF CLAIMS:	56
EXEMPLARY CLAIM:	1
LINE COUNT:	1349

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FILE 'MEDLINE, DGENE, EMBASE, SCISEARCH, USPATFULL, WPIDS, JICST-EPLUS, FSTA' ENTERED AT 10:31:56 ON 15 JAN 2003

L1	2316	S	BONE MORPHOGENIC PROTEIN
L2	26968	S	ARTICULAR CARTILAGE
L3	125	S	OSTEOCHONDRAL GRAFT
L4	0	S	L1 () L2 () L3
L5	76	S	L1 AND L2
L6	1	S	L5 AND L3
L7	1	S	L3 AND L1

=> d l5 ti abs ibib 1-10

L5 ANSWER 1 OF 76 MEDLINE

TI Long-term effect of nitric oxide synthase inhibitor on repair of **articular cartilage** defects repairing.

AB OBJECTIVE: To discuss the long-term effect of inducible nitric oxide synthase inhibitor S-methylisothiourea (SMT) on repair of **articular cartilage** defects. METHODS: Twenty-four adult New Zealand White rabbits with full-thickness defects of cartilage created in the trochlear groove of their bilateral femurs were divided into three groups randomly, 8 in each group: (1) control group in which nothing was filled into the defects; (2) BMP group in which the defects were filled with collagen fibrin gel impregnated with recombinant human **bone morphogenic protein** (rhBMP); and (3) SMT group in which the defects were filled with collagen fibrin gel impregnated with rhBMP and hypodermic injection of SMT (5 mg .(-1) 12 h(-1)) was given. The animals were killed one year later. The gross appearance of the defects was assessed. The amount of released NO and the activity of NOS were examined by chemical colorimetry. The distribution of collagen was

examined by immunohistochemistry. The proteoglycan synthesis and cell activity was assessed by incorporation of radiolabelled sodium sulphate Na(2)(35)SO(4) and bromodeoxyuridine. RESULTS: One year after the defects in SMT group showed greater improvement in margin integration, cellular morphology, and architecture within defect than those in BMP group and control group ($P < 0.01$). Immunohistochemistry showed that there was less type-I collagen and more type-II collagen in SMT group than in the other two groups. Radiolabelled sodium sulphate (Na(2)(35)SO(4)) incorporation test showed that the proteoglycan synthesis in defects was higher in SMT group than in the other two groups ($P < 0.01$). BrdU incorporation test showed cells in repaired tissue with remarkable proliferous activity. CONCLUSION: iNOS inhibitor SMT significantly improves the quality of repair of defected cartilage and delays its degradation.

ACCESSION NUMBER: 2002215446 MEDLINE
DOCUMENT NUMBER: 21951165 PubMed ID: 11953121
TITLE: Long-term effect of nitric oxide synthase inhibitor on repair of **articular cartilage** defects repairing.
AUTHOR: Sun Wei; Wang Jixing; Jin Dadi; Liu Xiaoxia
CORPORATE SOURCE: Department of Orthopaedics Surgery, Nanfang Hospital Affiliated to First Militery Medical University, Guangzhou 510515, China.
SOURCE: CHUNG-HUA I HSUEH TSA CHIH [CHINESE MEDICAL JOURNAL], (2002 Jan 10) 82 (1) 23-6.
Journal code: 7511141. ISSN: 0376-2491.
PUB. COUNTRY: China
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Chinese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020416
Last Updated on STN: 20020515
Entered Medline: 20020514

L5 ANSWER 2 OF 76 MEDLINE
TI Enhanced matrix synthesis and in vitro formation of cartilage-like tissue by genetically modified chondrocytes expressing BMP-7.
AB **Bone morphogenic protein**-7 (BMP-7) supports ectopic cartilage and bone formation, is expressed in normal **articular cartilage**, and increases matrix synthesis in chondrocytes. Based on this knowledge, we hypothesized that an adenovirus (Ad) vector encoding human BMP-7 could be used to modify chondrocytes genetically to improve their capacity for cartilage repair. An adenovirus vector encoding BMP-7 (AdBMP-7) was constructed and its bioactivity confirmed by ectopic bone formation assay. AdBMP-7 modification of bovine chondrocytes induced expression of BMP-7 mRNA and bioactive protein, resulting in an increase in incorporation of 35SO4- into proteoglycan, 3H-proline uptake into protein, and the expression of the cartilage-specific matrix genes, aggrecan and type II collagen. An in vitro model of chondrocyte transplantation was used to demonstrate the feasibility of using genetically modified chondrocytes to enhance formation of cartilage-like tissue. When transplanted onto cartilage explants and maintained in vitro for 3 weeks, chondrocytes modified with AdBMP-7 formed 1.9-fold thicker tissue than chondrocytes modified with a control vector ($P < 0.001$). This tissue was positive for type II collagen and proteoglycan but negative for type X collagen and demonstrated a cartilage-like morphology. These observations suggest that Ad-mediated transfer of BMP-7 gene to chondrocytes enhances the chondrocyte-specific matrix synthesis and their capacity to form cartilage-like tissue, thus representing a strategy that may improve cell-based cartilage repair.

ACCESSION NUMBER: 2001514436 MEDLINE
DOCUMENT NUMBER: 21446023 PubMed ID: 11562118
TITLE: Enhanced matrix synthesis and in vitro formation of cartilage-like tissue by genetically modified chondrocytes

expressing BMP-7.
AUTHOR: Hidaka C; Quitoriano M; Warren R F; Crystal R G
CORPORATE SOURCE: Division of Pulmonary and Critical Care Medicine, Weill Medical College of Cornell University, New York, NY, USA.. geneticmedicine@mail.med.cornell.edu
CONTRACT NUMBER: T32-AR07281 (NIAMS)
SOURCE: JOURNAL OF ORTHOPAEDIC RESEARCH, (2001 Sep) 19 (5) 751-8. Journal code: 8404726. ISSN: 0736-0266.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010920
Last Updated on STN: 20011008
Entered Medline: 20011004

L5 ANSWER 3 OF 76 MEDLINE
TI Cartilage and bone regeneration using gene-enhanced tissue engineering.
AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human **bone morphogenic protein**-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks. The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage** regeneration at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria. This is the first report of **articular cartilage** regeneration using a combined gene therapy and tissue engineering approach.
ACCESSION NUMBER: 2000488818 MEDLINE
DOCUMENT NUMBER: 20492911 PubMed ID: 11039767
TITLE: Cartilage and bone regeneration using gene-enhanced tissue engineering.
AUTHOR: Mason J M; Breitbart A S; Barcia M; Porti D; Pergolizzi R G; Grande D A
CORPORATE SOURCE: Department of Research, North Shore University Hospital-New York University School of Medicine, Manhasset 11030, USA.
SOURCE: CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, (2000 Oct) (379 Suppl) S171-8. Journal code: 0075674. ISSN: 0009-921X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001103

L5 ANSWER 4 OF 76 DGENE (C) 2003 THOMSON DERWENT
TI Isolated DNA encoding human SDF-5 protein - useful for controlling growth, differentiation etc. of cells, particularly of chondrocytes for treatment of arthritis etc., also pancreatic cells
AN AAW49082 Protein DGENE
AB The sequence is that of human SDF-5, a member of the Frazzled protein

family. Cells transformed with a vector containing the sequence are used to regulate genes, particularly pancreatic genes, or in combination with **bone morphogenic protein** 2 (BMP2), to increase differentiation of progenitor cells into chondrocytes. The protein may be used to treat osteoarthritis, rheumatoid arthritis, or **articular cartilage** defects, also to increase/inhibit cell formation, growth, differentiation, proliferation and/or maintenance in many other organs or tissues, e.g. for prevention or treatment of pancreatic cancer, diabetes (by inducing de novo formation of islet cells), other tissue defects, also to improve healing of wounds and to increase survival of nervous system cells, e.g. in cases of transplants The coding sequence can be used in gene therapy, and its fragments to detect related mRNA, while the protein is also used to generate antibodies, useful for affinity purification and as immunoassay reagents. Many other potential uses/activities for the gene and its encoded are contemplated but not exemplified, e.g. as cytokines, immuno-suppressants or immunostimulants, regulators of haematopoiesis, as fertility-control agents, haemostatic or thrombolytic agents, anti-inflammatory agents, antimicrobials, modulators of biorhythms and many more.

ACCESSION NUMBER: AAW49082 Protein DGENE
TITLE: Isolated DNA encoding human SDF-5 protein - useful for controlling growth, differentiation etc. of cells, particularly of chondrocytes for treatment of arthritis etc., also pancreatic cells
INVENTOR: Lavallie E R; Racie L A
PATENT ASSIGNEE: (GEMY) GENETICS INST INC.
PATENT INFO: WO 9835043 A1 19980813 69p
APPLICATION INFO: WO 1997-US18369 19971015
PRIORITY INFO: US 1997-848439 19970508
US 1997-796153 19970206
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1998-447240 [38]

L5 ANSWER 5 OF 76 DGENE (C) 2003 THOMSON DERWENT
TI Isolated DNA encoding human SDF-5 protein - useful for controlling growth, differentiation etc. of cells, particularly of chondrocytes for treatment of arthritis etc., also pancreatic cells
AN AAV32930 DNA DGENE
AB The sequence is that encoding human SDF-5, a member of the Frazzled protein family. Cells transformed with a vector containing the sequence are used to regulate genes, particularly pancreatic genes, or in combination with **bone morphogenic protein** 2 (BMP2), to increase differentiation of progenitor cells into chondrocytes. The protein may be used to treat osteoarthritis, rheumatoid arthritis, or **articular cartilage** defects, also to increase/inhibit cell formation, growth, differentiation, proliferation and/or maintenance in many other organs or tissues, e.g. for prevention or treatment of pancreatic cancer, diabetes (by inducing de novo formation of islet cells), other tissue defects, also to improve healing of wounds and to increase survival of nervous system cells, e.g. in cases of transplants The coding sequence can be used in gene therapy, and its fragments to detect related mRNA, while the protein is also used to generate antibodies, useful for affinity purification and as immunoassay reagents. Many other potential uses/activities for the gene and its encoded are contemplated but not exemplified, e.g. as cytokines, immuno-suppressants or immunostimulants, regulators of haematopoiesis, as fertility-control agents, haemostatic or thrombolytic agents, anti-inflammatory agents, antimicrobials, modulators of biorhythms and many more.

ACCESSION NUMBER: AAV32930 DNA DGENE
TITLE: Isolated DNA encoding human SDF-5 protein - useful for controlling growth, differentiation etc. of cells, particularly of chondrocytes for treatment of arthritis etc.,

also pancreatic cells
INVENTOR: Lavallie E R; Racie L A
PATENT ASSIGNEE: (GEMY)GENETICS INST INC.
PATENT INFO: WO 9835043 A1 19980813 69p
APPLICATION INFO: WO 1997-US18369 19971015
PRIORITY INFO: US 1997-848439 19970508
US 1997-796153 19970206
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 1998-447240 [38]

L5 ANSWER 6 OF 76 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
TI Enhanced matrix synthesis and in vitro formation of cartilage-like tissue by genetically modified chondrocytes expressing BMP-7.
AB **Bone morphogenic protein**-7 (BMP-7) supports ectopic cartilage and bone formation, is expressed in normal **articular cartilage**, and increases matrix synthesis in chondrocytes. Based on this knowledge, we hypothesized that an adenovirus (Ad) vector encoding human BMP-7 could be used to modify chondrocytes genetically to improve their capacity for cartilage repair. An adenovirus vector encoding BMP-7 (AdBMP-7) was constructed and its bioactivity confirmed by ectopic bone formation assay. AdBMP-7 modification of bovine chondrocytes induced expression of BMP-7 mRNA and bioactive protein, resulting in an increase in incorporation of (35)SO(-)(4) into proteoglycan, (3)H-proline uptake into protein, and the expression of the cartilage-specific matrix genes, aggrecan and type II collagen. An in vitro model of chondrocyte transplantation was used to demonstrate the feasibility of using genetically modified chondrocytes to enhance formation of cartilage-like tissue. When transplanted onto cartilage explants and maintained in vitro for 3 weeks, chondrocytes modified with AdBMP-7 formed 1.9-fold thicker tissue than chondrocytes modified with a control vector ($P < 0.001$). This tissue was positive for type II collagen and proteoglycan but negative for type X collagen and demonstrated a cartilage-like morphology. These observations suggest that Ad-mediated transfer of BMP-7 gene to chondrocytes enhances the chondrocyte-specific matrix synthesis and their capacity to form cartilage-like tissue, thus representing a strategy that may improve cell-based cartilage repair.
ACCESSION NUMBER: 2001305182 EMBASE
TITLE: Enhanced matrix synthesis and in vitro formation of cartilage-like tissue by genetically modified chondrocytes expressing BMP-7.
AUTHOR: Hidaka C.; Quitoriano M.; Warren R.F.; Crystal R.G.
CORPORATE SOURCE: C. Hidaka, Institute of Genetic Medicine, Weill Medical Coll. of Cornell Univ., New York, NY 10021, United States. geneticmedicine@mail.med.cornell.edu
SOURCE: Journal of Orthopaedic Research, (2001) 19/5 (751-758). Refs: 40
ISSN: 0736-0266 CODEN: JOREDR
PUBLISHER IDENT.: S 0736-0266(01)00019-5
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
022 Human Genetics
029 Clinical Biochemistry
033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English

L5 ANSWER 7 OF 76 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
TI Cartilage and bone regeneration using gene-enhanced tissue engineering.
AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United

States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human **bone morphogenic protein**-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks. The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage** regeneration at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria. This is the first report of **articular cartilage** regeneration using a combined gene therapy and tissue engineering approach.

ACCESSION NUMBER: 2000362559 EMBASE
TITLE: Cartilage and bone regeneration using gene-enhanced tissue engineering.
AUTHOR: Mason J.M.; Breitbart A.S.; Barcia M.; Porti D.; Pergolizzi R.G.; Grande D.A.
CORPORATE SOURCE: Dr. J.M. Mason, Gene Therapy Vector Laboratory, Department of Research, North Shore University Hospital, 350 Community Drive, Manhasset, NY 11030, United States
SOURCE: Clinical Orthopaedics and Related Research, (2000) -/379 SUPPL. (S171-S178).
Refs: 27
ISSN: 0009-921X CODEN: CORTBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 022 Human Genetics
033 Orthopedic Surgery
036 Health Policy, Economics and Management
LANGUAGE: English
SUMMARY LANGUAGE: English

L5 ANSWER 8 OF 76 SCISEARCH COPYRIGHT 2003 ISI (R)
TI Cartilage and bone regeneration using gene-enhanced tissue engineering
AB Joint cartilage injury remains a major problem in orthopaedics with more than 500,000 cartilage repair procedures performed yearly in the United States at a cost of hundreds of millions of dollars. No consistently reliable means to regenerate joint cartilage currently exists. The technologies of gene therapy and tissue engineering were combined using a retroviral vector to stably introduce the human hone morphogenic protein-7 complementary deoxyribonucleic acid into periosteal-derived rabbit mesenchymal stem cells. **Bone morphogenic protein**-7 secreting gene modified cells subsequently were expanded in monolayer culture, seeded onto polyglycolic acid grafts, implanted into a rabbit knee osteochondral defect model, and evaluated for bone and cartilage repair after 4, 8, and 12 weeks, The grafts containing **bone morphogenic protein**-7 gene modified cells consistently showed complete or near complete bone and **articular cartilage** regeneration at 8 and 12 weeks whereas the grafts from the control groups had poor repair as judged by macroscopic, histologic, and immunohistologic criteria, This is the first report of **articular cartilage** regeneration using a combined gene therapy and tissue engineering approach.

ACCESSION NUMBER: 2000:777821 SCISEARCH
THE GENUINE ARTICLE: 362NP
TITLE: Cartilage and bone regeneration using gene-enhanced tissue engineering
AUTHOR: Mason J M (Reprint); Breitbart A S; Barcia M; Porti D; Pergolizzi R G; Grande D A

CORPORATE SOURCE: NYU, GENE THERAPY VECTOR LAB, DEPT RES, N SHORE UNIV HOSP, SCH MED, 350 COMMUNITY DR, MANHASSET, NY 11030 (Reprint); NYU, DIV PLAST & RECONSTRUCT SURG, SCH MED, N SHORE UNIV HOSP, MANHASSET, NY 11030; NYU, DIV ORTHOPED SURG, SCH MED, N SHORE UNIV HOSP, DEPT SURG, MANHASSET, NY 11030
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, (OCT 2000) No. 379, Supp. [S], pp. S171-S178.
Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621.
ISSN: 0009-921X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 27
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L5 ANSWER 9 OF 76 USPATFULL
TI Secreted and transmembrane polypeptides and nucleic acids encoding the same
AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:3495 USPATFULL
TITLE: Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S): Ashkenazi, Avi, San Mateo, CA, UNITED STATES
Botstein, David, Belmont, CA, UNITED STATES
Desnoyers, Luc, San Francisco, CA, UNITED STATES
Eaton, Dan L., San Rafael, CA, UNITED STATES
Ferrara, Napoleone, San Francisco, CA, UNITED STATES
Filvaroff, Ellen, San Francisco, CA, UNITED STATES
Fong, Sherman, Alameda, CA, UNITED STATES
Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES
Gerber, Hanspeter, San Francisco, CA, UNITED STATES
Gerritsen, Mary E., San Mateo, CA, UNITED STATES
Goddard, Audrey, San Francisco, CA, UNITED STATES
Godowski, Paul J., Burlingame, CA, UNITED STATES
Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES
Gurney, Austin L., Belmont, CA, UNITED STATES
Hillan, Kenneth J., San Francisco, CA, UNITED STATES
Kljavin, Ivar J., Lafayette, CA, UNITED STATES
Mather, Jennie P., Millbrae, CA, UNITED STATES
Pan, James, Belmont, CA, UNITED STATES
Paoni, Nicholas F., Belmont, CA, UNITED STATES
Roy, Margaret Ann, San Francisco, CA, UNITED STATES
Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003003530	A1	20030102
APPLICATION INFO.:	US 2001-904011	A1	20010711 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18

Sep 2000, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	WO 1998-US18824	19980910	
	WO 1998-US19177	19980914	
	WO 1998-US19330	19980916	
	WO 1998-US19437	19980917	
	WO 1998-US25108	19981201	
	WO 1999-US20594	19990908	
	WO 1999-US20944	19990913	
	WO 1999-US21090	19990915	
	WO 1999-US21547	19990915	
	WO 1999-US23089	19991005	
	WO 1999-US28214	19991129	
	WO 1999-US28313	19991130	
	WO 1999-US28301	19991201	
	WO 1999-US28564	19991202	
	WO 1999-US28565	19991202	
	WO 1999-US30095	19991216	
	WO 1999-US30999	19991220	
	WO 1999-US30911	19991220	
	WO 2000-US219	20000105	
	WO 2000-US3565	20000211	
	WO 2000-US4414	20000222	
	WO 2000-US5004	20000224	
	WO 2000-US5841	20000302	
	WO 2000-US7377	20000320	
	WO 2000-US8439	20000330	
	WO 2000-US14042	20000522	
	WO 2000-US15264	20000602	
	WO 2000-US20710	20000728	
	WO 2000-US23328	20000824	
	US 1997-59115P	19970917	(60)
	US 1997-59184P	19970917	(60)
	US 1997-59122P	19970917	(60)
	US 1997-59117P	19970917	(60)
	US 1997-59113P	19970917	(60)
	US 1997-59121P	19970917	(60)
	US 1997-59119P	19970917	(60)
	US 1997-59263P	19970918	(60)
	US 1997-59266P	19970918	(60)
	US 1997-62125P	19971015	(60)
	US 1997-62287P	19971017	(60)
	US 1997-62285P	19971017	(60)
	US 1997-63486P	19971021	(60)
	US 1997-62816P	19971024	(60)
	US 1997-62814P	19971024	(60)
	US 1997-63127P	19971024	(60)
	US 1997-63120P	19971024	(60)
	US 1997-63121P	19971024	(60)
	US 1997-63045P	19971024	(60)
	US 1997-63128P	19971024	(60)
	US 1997-63329P	19971027	(60)
	US 1997-63327P	19971027	(60)
	US 1997-63549P	19971028	(60)
	US 1997-63541P	19971028	(60)
	US 1997-63550P	19971028	(60)
	US 1997-63542P	19971028	(60)
	US 1997-63544P	19971028	(60)
	US 1997-63564P	19971028	(60)
	US 1997-63734P	19971029	(60)
	US 1997-63738P	19971029	(60)
	US 1997-63704P	19971029	(60)

	US 1997-63435P	19971029 (60)
	US 1997-64215P	19971029 (60)
	US 1997-63735P	19971029 (60)
	US 1997-63732P	19971029 (60)
	US 1997-64103P	19971031 (60)
	US 1997-63870P	19971031 (60)
	US 1997-64248P	19971103 (60)
	US 1997-64809P	19971107 (60)
	US 1997-65186P	19971112 (60)
	US 1997-65846P	19971117 (60)
	US 1997-65693P	19971118 (60)
	US 1997-66120P	19971121 (60)
	US 1997-66364P	19971121 (60)
	US 1997-66772P	19971124 (60)
	US 1997-66466P	19971124 (60)
	US 1997-66770P	19971124 (60)
	US 1997-66511P	19971124 (60)
	US 1997-66453P	19971124 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BRINKS HOFER GILSON & LIONE, P.O. BOX 10395, CHICAGO, IL, 60610	
NUMBER OF CLAIMS:	38	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	124 Drawing Page(s)	
LINE COUNT:	21255	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 76 USPATFULL

TI Secreted and transmembrane polypeptides and nucleic acids encoding the same

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2002:344632 USPATFULL
TITLE:	Secreted and transmembrane polypeptides and nucleic acids encoding the same
INVENTOR(S):	Ashkenazi, Avi, San Mateo, CA, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES Desnoyers, Luc, San Francisco, CA, UNITED STATES Eaton, Dan L., San Rafael, CA, UNITED STATES Ferrara, Napoleone, San Francisco, CA, UNITED STATES Filvaroff, Ellen, San Francisco, CA, UNITED STATES Fong, Sherman, Alameda, CA, UNITED STATES Gao, Wei-Qiang, Palo Alto, CA, UNITED STATES Gerber, Hanspeter, San Francisco, CA, UNITED STATES Gerritsen, Mary E., San Mateo, CA, UNITED STATES Goddard, Audrey, San Francisco, CA, UNITED STATES Godowski, Paul J., Burlingame, CA, UNITED STATES Grimaldi, J. Christopher, San Francisco, CA, UNITED STATES Gurney, Austin L., Belmont, CA, UNITED STATES Hillan, Kenneth J., San Francisco, CA, UNITED STATES Kljavin, Ivar J., Lafayette, CA, UNITED STATES Mather, Jennie P., Millbrae, CA, UNITED STATES Pan, James, Belmont, CA, UNITED STATES Paoni, Nicholas F., Belmont, CA, UNITED STATES Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES
Tumas, Daniel, Orinda, CA, UNITED STATES
Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES
Wood, William I., Hillsborough, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002198366	A1	20021226
APPLICATION INFO.:	US 2001-907841	A1	20010717 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-665350, filed on 18 Sep 2000, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1998-US18824	19980910
	WO 1998-US19177	19980914
	WO 1998-US19330	19980916
	WO 1998-US19437	19980917
	WO 1998-US25108	19981201
	WO 1999-US20594	19990908
	WO 1999-US20944	19990913
	WO 1999-US21090	19990915
	WO 1999-US21547	19990915
	WO 1999-US23089	19991005
	WO 1999-US28214	19991129
	WO 1999-US28313	19991130
	WO 1999-US28301	19991201
	WO 1999-US28564	19991202
	WO 1999-US28565	19991202
	WO 1999-US30095	19991216
	WO 1999-US30999	19991220
	WO 1999-US30911	19991220
	WO 2000-US219	20000105
	WO 2000-US3565	20000211
	WO 2000-US4414	20000222
	WO 2000-US5004	20000224
	WO 2000-US5841	20000402
	WO 2000-US7377	20000320
	WO 2000-US8439	20000330
	WO 2000-US14042	20000522
	WO 2000-US15264	20000602
	WO 2000-US20710	20000728
	WO 2000-US23328	20000824
	US 1997-59115P	19970917 (60)
	US 1997-59184P	19970917 (60)
	US 1997-59122P	19970917 (60)
	US 1997-59117P	19970917 (60)
	US 1997-59113P	19970917 (60)
	US 1997-59121P	19970917 (60)
	US 1997-59119P	19970917 (60)
	US 1997-59263P	19970918 (60)
	US 1997-59266P	19970918 (60)
	US 1997-62125P	19971015 (60)
	US 1997-62287P	19971017 (60)
	US 1997-62285P	19971017 (60)
	US 1997-63486P	19971021 (60)
	US 1997-62816P	19971024 (60)
	US 1997-62814P	19971024 (60)
	US 1997-63127P	19971024 (60)
	US 1997-63120P	19971024 (60)
	US 1997-63121P	19971024 (60)
	US 1997-63045P	19971024 (60)
	US 1997-63128P	19971024 (60)

Generate Collection

L2: Entry 3 of 5 File: USPT Feb 3, 1998

DOCUMENT-IDENTIFIER: US 5713374 A
TITLE: Fixation method for the attachment of wound repair materials to cartilage defects

BSPR:
Techniques were developed to utilize autologous tissue, such as transplantation of: 1) osteochondral grafts (DePalma, et al. 1963); 2) chondrocytes (Grande, et al. 1989); 3) periosteum (Homminga, et al., 1990); and 4) demineralized bone (Dahlberg and Kreicbers, 1991). These techniques have been used to transplant whole or partial joints, with mixed results. For example, a number of investigators attempted to heal cartilage defects using chondrocytes isolated from epiphysial plates, as well as articular cells, with the hypothesis that these cells would have a greater chance of success due to their heightened metabolism (Itay, et al. 1987). Clinical studies using cultured cells reported excellent results, showing a significant decrease in pain and restoration of normal function after two to four years post-op (Iloika, et al. 1990; Ilomminga, et al. 1990).

WEST

End of Result Set

☐ Generate Collection

L2: Entry 5 of 5 File: USPT Feb 10, 1987

DOCUMENT-IDENTIFIER: US 4642120 A
TITLE: Repair of cartilage and bones

BSPR:
When articular cartilage is damaged by trauma, infection or degenerative processes, such damages generally fail to heal or even improve. Hitherto various attempts have been made to resort to osteochondral grafts and to the provision of various forms of prosthesis, but long term results have been poor and discouraging. There have been reported attempts to use cultured chondrocytes as a source of cartilage transplants, but integration of the transplants with the neighboring cartilage was generally unsatisfactory.

5226914

Got it

L16 ANSWER 7 OF 8 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 97270218 MEDLINE
DOCUMENT NUMBER: 97270218
TITLE: **Regeneration** of **articular cartilage** defects in rabbits by osteogenic protein-1 (**bone morphogenetic protein**-7).
AUTHOR: Grgic M; Jelic M; Basic V; Basic N; Pecina M; Vukicevic S
CORPORATE SOURCE: Drago Perovic Institute of Anatomy, School of Medicine, University of Zagreb, Croatia.
SOURCE: ACTA MEDICA CROATICA, (1997) 51 (1) 23-7.
Journal code: BH2. ISSN: 1330-0164.
PUB. COUNTRY: Croatia
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 199707

AB Osteogenic protein-1 (OP-1, **BMP**-7), a member of the transforming growth factor-beta family, induces cartilage and bone formation when implanted at intra and extraskeletal sites in vivo. The human OP-1 gene has been cloned and biologically active recombinant OP-1 homodimers have been produced. In the present study, the authors investigated the influence of OP-1 on healing of full-thickness **articular cartilage** defects, made by drilling two adjacent (phi 3mm) holes through **articular cartilage** of NZW rabbit knee joint were dissected and examined histomorphometrically. Results indicated that OP-1 induced **articular cartilage** healing and **regeneration** of the joint surface which contained cells resembling mature joint chondrocytes. These data imply a new strategy for biological repair of damaged joint surfaces in humans.

ILL

L17 ANSWER 2 OF 4 MEDLINE
ACCESSION NUMBER: 93101749 MEDLINE
DOCUMENT NUMBER: 93101749
TITLE: Reconstruction of the bone--bone marrow organ by osteogenin, a bone morphogenetic protein, and demineralized bone matrix in calvarial defects of adult primates.
AUTHOR: Ripamonti U; Ma S S; Cunningham N S; Yeates L; Reddi A H
CORPORATE SOURCE: Medical Research Council/University of the Witwatersrand, Johannesburg, South Africa.
SOURCE: PLASTIC AND RECONSTRUCTIVE SURGERY, (1993 Jan) 91 (1) 27-36.
Journal code: P9S. ISSN: 0032-1052.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199303

AB Information concerning the efficacy of osteogenin, a **bone morphogenetic protein**, and demineralized bone matrix in orthotopic sites in nonhuman primates is a prerequisite for potential clinical application in humans. After exposure of the calvaria, 84 cranial defects, 25 mm in diameter, were prepared in 26 adult male baboons (Papio ursinus). Defects were implanted with insoluble collagenous bone matrix (ICBM, the inactive collagenous residue after dissociative extraction of bone matrix with 4 M guanidine hydrochloride) reconstituted with osteogenin fractions isolated from baboon bone matrix by chromatography on heparin-Sepharose and hydroxyapatite-Ultrogel (Og Hep-HA) or osteogenin further purified using Sephacryl S-200 gel filtration chromatography (Og S-200). Baboon osteogenin with the highest biologic activity in a rodent bioassay, as determined by alkaline phosphatase activity, calcium content, and histologic analysis, was used for orthotopic implantation in baboons. Additional defects were implanted with baboon demineralized bone matrix (DBM) or ICBM without osteogenin as control. Defects also were **grafted** with corticocancellous bone harvested from the iliac crest or left ungrafted to monitor the spontaneous **regeneration** potential of the adult baboon calvaria. Undecalcified bone sections at 7 microns were prepared from the harvested specimens 30 and 90 days after surgery. Histomorphometry demonstrated that Og S-200 induced copious amounts of bone and osteoid as early as day 30 ($P < 0.01$ versus ICBM, autogenous **grafts** and untreated defects). At day 90, in implants of Og S-200, Og Hep-HA, and DBM, bone and marrow formation was extensive, culminating in complete **regeneration** of the craniotomies. In implants of DBM, bone formed with an intervening phase of **cartilage** development. This provides the phenotypic evidence of endochondral bone differentiation by induction in defects of membranous calvarial bone in adult primates. These results establish the potential therapeutic application of osteogenin and demineralized bone matrix for the architectural reconstruction of the bone-bone marrow organ in humans.

Got it

L17 ANSWER 4 OF 4 MEDLINE
ACCESSION NUMBER: 86278360 MEDLINE
DOCUMENT NUMBER: 86278360
TITLE: Bone repair induced by bone morphogenetic protein in ulnar defects in dogs.
AUTHOR: Nilsson O S; Urist M R; Dawson E G; Schmalzried T P; Finerman G A
SOURCE: JOURNAL OF BONE AND JOINT SURGERY. BRITISH VOLUME, (1986 Aug) 68 (4) 635-42.
Journal code: HK7. ISSN: 0301-620X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198611

AB In dogs, resection of a length of the ulna equal to twice the diameter of the mid-shaft leaves a defect which consistently fails to unite. In response to an implant of 100 mg of bovine **bone morphogenetic protein** (**BMP**), the defect becomes filled by callus consisting of fibrocartilage, **cartilage** and woven bone within four weeks. The **cartilage** is resorbed and replaced by new bone in four to eight weeks. Woven bone is then resorbed, colonised by bone marrow cells and remodelled into lamellar bone. Union of the defect is produced by 12 weeks. Control defects filled with autogeneic cortical bone chips unite after the same period. In **regeneration** induced by **bone morphogenetic protein** (**BMP**) and in repair enhanced by bone **graft**, union depends upon the proliferation of cells within and around the bone ends. Our working hypothesis is that **BMP** induces the differentiation of perivascular connective tissue cells into chondroblasts and osteoprogenitor cells and thereby augments the process of bone **regeneration** from the cells already present in the endosteum and periosteum.

Got it 7/27

L17 ANSWER 1 OF 4 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 96023917 MEDLINE
DOCUMENT NUMBER: 96023917
TITLE: Commercially-prepared allograft material has biological activity in vitro.
AUTHOR: Shigeyama Y; D'Errico J A; Stone R; Somerman M J
CORPORATE SOURCE: Department of Periodontics/Prevention/Geriatrics, University of Michigan, Ann Arbor, USA.
CONTRACT NUMBER: DE09532 (NIDCR)
SOURCE: JOURNAL OF PERIODONTOLOGY, (1995 Jun) 66 (6) 478-87. Journal code: JMT. ISSN: 0022-3492.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Dental Journals
ENTRY MONTH: 199601

AB The well-established finding that implantation of demineralized bone matrix at non-skeletal sites results in formation of **cartilage** and bone has been attributed to bone morphogenetic proteins/factors. Commercially-available demineralized bone allograft materials are being used currently to reconstruct/**regenerate** bone. The studies described here focused on establishing biological activity of protein extracts prepared from commercially obtained bone **graft** material in vitro. Furthermore, the biological activity of these protein extracts in vitro was compared with similar extracts prepared from freshly obtained human bone. Biological activities of bone matrix proteins examined included their ability to promote proliferation, attachment, and migration of gingival fibroblasts using an in vitro system. Guanidine followed by guanidine/EDTA was used to separate bone matrix proteins into proteins associated with soft tissues of bone and proteins retained within the mineral compartment, respectively. Two preparations of each starting material were tested and the biological activity of each preparation was evaluated in triplicate at least three times. Slot blot analysis revealed that commercially-prepared material contained type I collagen; fibronectin; BSP; and **BMP**-2, 4, and 7. However, the freshly prepared bone extracts appeared to have higher **BMP** concentrations. The ability of commercial extracts to promote cell proliferation, while significant, was limited and significantly less when compared with similar extracts prepared from freshly obtained bone. All extracts promoted cell attachment significantly, while none of the extracts promoted cell migration. Thus, commercially-prepared material retained proteins having the capacity to influence cell behavior in vivo. However, some biological activity as measured in vitro was lost as a result of tissue processing.

L16 ANSWER 5 OF 8 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1998258985 MEDLINE
DOCUMENT NUMBER: 98258985
TITLE: Osteogenic protein (OP-1, BMP-7) stimulates cartilage differentiation of human and goat perichondrium tissue in vitro.
AUTHOR: Klein-Nulend J; Louwerse R T; Heyligers I C; Wuisman P I; Semeins C M; Goei S W; Burger E H
CORPORATE SOURCE: ACTA-Vrije Universiteit, Department of Oral Cell Biology, Amsterdam, The Netherlands..
J.Klein_Nulend.OCB.ACTA@med.vu.nl
SOURCE: JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (1998 Jun 15) 40 (4) 614-20.
Journal code: HJJ. ISSN: 0021-9304.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199811
ENTRY WEEK: 19981104
AB The objective of this study was to examine in vitro the influence of recombinant human osteogenic protein-1 [rhOP-1, or **bone morphogenetic protein**-7 (**BMP**-7)] on cartilage formation by human and goat perichondrium tissue containing progenitor cells with chondrogenic potential. Fragments of outer ear perichondrium tissue were embedded in clotting autologous blood to which rhOP-1 had been added or not added (controls), and the resulting explant was cultured for 3 weeks without further addition of rhOP-1. Cartilage formation was monitored biochemically by measuring [35S]-sulphate incorporation into proteoglycans and histologically by monitoring the presence of metachromatic matrix with cells in nests. The presence of rhOP-1 in the explant at the beginning of culture stimulated [35S]-sulphate incorporation into proteoglycans in a dose-dependent manner after 3 weeks of culture. Maximal stimulation was reached at 40 microg/mL (human explants: +148%; goat explants: +116%). Histology revealed that explants treated with 20-200 microg/mL of rhOP-1, but not untreated control explants, contained areas of metachromatic-staining matrix with chondrocytes in cell nests. It was concluded that rhOP-1 stimulates differentiation of cartilage from perichondrium tissue. The direct actions of rhOP-1 on perichondrium cells in the stimulation of chondrocytic differentiation and production of cartilage matrix in vitro provides a cellular mechanism for the induction of cartilage formation by rhOP-1 in vivo. Thus rhOP-1 may promote early steps in the cascade of events leading to cartilage formation and could prove to be an interesting factor in the **regeneration** of cartilage in **articular cartilage** defects.